

# **Promoting Innovation in the Technology Cluster of Southwest Washington**

An Application for an Innovation Zone Planning Grant



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### **Summary**

The Columbia River Economic Development Council is proposing the development of a strategic plan to promote innovation and growth within the technology cluster of Southwest Washington. The plan will be developed by a partnership of private sector research and development firms, higher education, workforce development and economic development representatives. It will focus on integrating and prioritizing current public and private innovation initiatives into a unified strategy. The plan will identify strategic public and private investments to spur local innovation in the semiconductor and technology cluster. The CREDC is requesting a grant of \$10,000 to complete the work and pledges an equal amount in local contribution toward the project.

### **Introduction**

Southwest Washington is home to Washington's Silicon Forest, a concentration of high technology industries in the Vancouver/ Portland metropolitan area. Core competencies of the cluster include semiconductor and microelectronics design and manufacturing, display, software and printing research and development. The regional cluster faces three barriers to continue growth.

First, unlike other national technology centers, Southwest Washington's technology cluster did not evolve in proximity or collaboration with a major research university. Through the 90's regional companies such as Tektronix and Intel served as surrogate centers of innovation and sources of entrepreneurial start-ups that fueled economic growth. The challenge facing the region is that sources of corporate innovation are now global in focus and local investment is lagging. Corporate research and development investment is worldwide. The region must therefore develop the next source of innovation to support business and economic growth.

The absence of a robust research university limits emerging and small firms' ability to partner on research initiatives or draw on university based talent to support growth. To overcome this gap, a number of regional firms rely on distant labs and collaborators in Seattle, the Tri-Cities and Oregon to conduct research on new products and manufacturing methods. This inefficient arrangement does not support the long term needs of the region.

The third challenge facing the regional cluster is the lack of local graduates in the math, sciences and high impact disciplines. The foundation for an innovation economy is human talent. Competition for this resource is fierce. Local technology companies desire the ability to recruit interns and full time employees from the region. These companies believe enhanced local production of Bachelors and advanced degrees at

Washington State University – Vancouver will heighten their ability to recruit and retain talent.

Southwest Washington has made previous calls to support its technology and innovative industries. There have been incremental successes that include:

- ◆ Establishment of the Science and Engineering Institute at Washington State University- Vancouver that addresses ‘pipeline’ issues in the math and science disciplines within the regional school districts and community colleges.
- ◆ Passage of three pieces of legislation targeted at supporting research, development and reinvestment in the semiconductor sector.
- ◆ Funding and authority to admit freshman and sophomores at WSU-V to support growth of high impact degrees.

Paradoxically, the region has successfully supported the growth of the Silicon Forest absent a long term strategy. The current strategy is composed of discrete components developed by separate entities with various levels of communications and integration. It resembles a well crafted ransom note. While the message that innovation is important to the regional economy is clear, there is a risk that some of the operant verbs or punctuation are missing. The goal of the proposal is to transfer the current strategy from ransom note to novella.

### **Incremental Innovation Strategies**

The goal of furthering the innovation in SW Washington is not new. There are several working concepts developed in collaboration of economic development, education and private sector interests. These include:

- ✓ Further expansion of WSU –V’s science and engineering capacities including:
  - The construction of a new engineering laboratory and classroom on the Vancouver campus.
  - Securing high demand/ high impact funding to establish the electrical engineering degree program at WSU-V by fall 2010.
  - Securing high demand/ high impact funding to expand computer science and biological sciences.
  - Recruitment of high profile/ high impact faculty in strategic disciplines complementary to the regional technology cluster.
  - Securing research and development funding to support research on topics of interest to regional businesses.
- ✓ Establishing within the WSU –Vancouver Engineering and Science Institute a Center for Semiconductor Research, Development and Innovation. The Center will include the development of a research park on the WSU-V campus and a satellite of the Washington Technology Center Microfabrication Laboratory to support research and development and innovation in the semiconductor cluster and other technology based industries.

- ✓ Expanding customized training supported by funding for incumbent industry workers in technology based firms.
- ✓ Funding demand side training through the Southwest Washington Workforce Development council for employee retention and career progression in technology based companies.
- ✓ Providing cluster specific recruitment, screening and work readiness assessment through in-kind support and state funding.

The above concepts have been refined to varying levels of specificity by their proponents. The purpose of this proposal is to deepen and refine these strategies and produce a detailed and coordinated implementation plan.

Topics that will be addressed in the project include:

- Geographic boundaries of the zone: SW Washington is unique in that it's economic and cluster boundaries include two states. Higher education and research resources (while inadequate) are located throughout the metro area. Another question to be addressed is how to serve rural businesses in Cowlitz and Skamania counties.
- Identification of Strategic Resources. It is apparent that the strategies identified to date take significant public and private resources. The project will refine original estimates, sources and uses, and prioritize and schedule all investments.
- Identification of Technological Advances. As the semiconductor and microchip industry continues to follow the path of Moore's Law, thermal loading will increasingly become a barrier to processor performance. Another issue is the need for increased productivity in manufacturing processes to lower operating costs and increase productivity. Developing innovative solutions to these three areas will advance not only the cause of local companies but the industry as a whole.
- Identification of Strategic Public Policies. Based upon the adopted strategy, supportive public policy changes and strategic investments will be identified. This will include the identification of the responsible parties to guide the implementation of the proposed strategy.

## **Strategies and Resources.**

The Columbia River Economic Development Council will lead the development of the strategy. The CREDC will use a collaborative process to identify strategies and resources to foster economic activity within the Southwest Washington Innovation Zone.

The process is simple and straight forward. It will rely on the private sector and those involved in the research and development industry to devise the public and private agenda. The CREDC will rely heavily on the Clark County High Tech Council to provide input on topics for innovation support and cooperation with existing local research programs, labor force and education requirements, and areas for incumbent worker training.

The Tech Council is a CEO level association of technology businesses. They are organized as a Washington non-profit and have been active in public policy formation and education for six years. They have been highly successful in implementing a plan to promote the technology industry in SW Washington. Their successes includes the adoption of incentives for investment in the semiconductor sector, securing major transportation improvements to serve the technology cluster, participating on Governor Locke's Competitiveness Council and securing funding for the expansion of Washington State University-Vancouver. The Council includes representatives of such firms as nLight Photonics, Wafer Tech. Linear Technology, Sharp Laboratories and Hewlett-Packard.,

Parties that will participate in the process include:

- ◆ The Clark County High Tech Council,
- ◆ Washington State University-Vancouver,
- ◆ Clark College,
- ◆ The Columbia River Economic Development Council,
- ◆ Washington Technology Center (WTC),
- ◆ Port of Vancouver.

This input will be gathered through a facilitated strategic planning retreat scheduled for June 24, 2006. Based upon this input the CREDC will identify best practices from other regions throughout the US including university based programs to support innovation and economic development.

Information from both sources will be used to craft a final strategy. The strategy will be reviewed and approved by all collaborating in the process prior to delivery to the State.

The final product of the proposal is a detailed implementation plan including inputs and outcomes, responsible parties, public and private financing and cooperating parties.

## Sources and Use of Funds

The funding requested under this project (\$10,000) will be used for staff and research support for development of the proposal. The request will be matched by in-kind staff resources from the cooperating parties.

Use	Request	In-Kind Contributions <sup>1</sup>
Project Management (CREDC)	6,000	2,000
High Tech Council and Local Contributions		6,000
Research Support <sup>2</sup>	2,000	1,000
Report Preparation and Dissemination <sup>3</sup>	2,000	1,000
	10,000	10,000

Notes:

1 - in-kind valued at \$100 per hour

2 - contractor

3 - web and print